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Serial No. 09/577,264
Docket No. 0002.12**Claims:**

Please amend claims 56, 60, 65 and 66 as shown.

As amended, the following listing of claims will replace all prior versions and listings of claims in the application:

1-19. (Cancelled)

20. (Withdrawn) A pharmaceutical composition consisting essentially of a biologically active N-terminal fragment of parathyroid hormone, a pharmaceutically acceptable bulking agent and an aerosol propellant, wherein the composition is housed within a device designed for delivering an aerosolized bolus through the mouth.

21. (Withdrawn) The pharmaceutical composition of claim 20, wherein the aerosol propellant comprises a chlorofluorocarbon or a hydrofluorocarbon.

22-23. (Cancelled)

24. (Withdrawn) The pharmaceutical composition of claim 20, wherein the aerosol propellant comprises a chlorofluorocarbon.

25. (Cancelled)

26. (Withdrawn) The pharmaceutical composition of claim 20, wherein the aerosol propellant comprises a hydrofluorocarbon.

27. (Cancelled)

28. (Withdrawn) The pharmaceutical composition of claim 20, wherein the composition comprises a powder having a mean particle size in the range from 0.5 μm to 5 μm .

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29. (Withdrawn) The pharmaceutical composition of claim 20, wherein the bulking agent is selected from the group consisting of sucrose, lactose, trehalose, human serum albumin, glycine, cellobiose, dextrans, maltotriose, pectin, sodium citrate, sodium ascorbate, mannitol, and combinations thereof.

30. (Withdrawn) The pharmaceutical composition of claim 20, wherein the biologically active N-terminal fragment of parathyroid hormone is PTH34.

31. (Withdrawn) The pharmaceutical composition of claim 20, wherein the biologically active N-terminal fragment of parathyroid hormone is PTH38.

32. (Withdrawn) A pharmaceutical composition comprising a biologically active N-terminal fragment of parathyroid hormone and a propellant, wherein the composition lacks a penetration enhancer and further wherein the composition is housed within a device designed for delivering an aerosolized bolus through the mouth.

33. (Withdrawn) The pharmaceutical composition of claim 32, wherein the aerosol propellant comprises a chlorofluorocarbon or a hydrofluorocarbon.

34. (Withdrawn) The pharmaceutical composition of claim 32, wherein the aerosol propellant comprises a chlorofluorocarbon.

35. (Cancelled)

36. (Withdrawn) The pharmaceutical composition of claim 32, wherein the aerosol propellant is a hydrofluorocarbon.

37. (Cancelled)

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38. (Withdrawn) The pharmaceutical composition of claim 32, wherein the composition comprises a powder having a mean particle size in the range from 0.5 μm to 5 μm .

39. (Withdrawn) The pharmaceutical composition of claim 32, further comprising a bulking agent.

40. (Cancelled)

41. (Withdrawn) The pharmaceutical composition of claim 32, wherein the composition further comprises an additive.

42-45. (Cancelled)

46. (Withdrawn) The pharmaceutical composition of claim 41, wherein the additive is a lower alcohol.

47. (Withdrawn) The pharmaceutical composition of claim 46, wherein the lower alcohol is ethanol.

48. (Withdrawn) The pharmaceutical composition of claim 41, wherein the additive is a chemical stabilizer.

49. (Withdrawn) The pharmaceutical composition of claim 48, wherein the chemical stabilizer is selected from the group consisting of buffers, salts, and combinations thereof.

50. (Withdrawn) The pharmaceutical composition of claim 49, wherein the chemical stabilizer is a buffer.

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51. (Withdrawn) The pharmaceutical composition of claim 50, wherein the buffer is selected from the group consisting of phosphate buffers, citrate buffers, acetate buffers, tris-HCl buffers, and combinations thereof.

52. (Withdrawn) The pharmaceutical composition of claim 45, wherein the wherein the chemical stabilizer is a salt.

53. (Withdrawn) The pharmaceutical composition of claim 52, wherein the salt is selected from the group consisting of sodium chloride, sodium carbonate, calcium chloride, and combinations thereof.

54. (Withdrawn) The pharmaceutical composition of claim 32, wherein the biologically active N-terminal fragment of parathyroid hormone is PTH34.

55. (Withdrawn) The pharmaceutical composition of claim 32, wherein the biologically active N-terminal fragment of parathyroid hormone is PTH38.

56. (Currently Amended) A method for treating osteoporosis in a mammalian host comprising,

~~administering by inhalation an aerosolized bolus of dispersing a powder~~
pharmaceutical composition consisting essentially of a therapeutically effective amount of a biologically active N-terminal fragment of parathyroid hormone, a pharmaceutically acceptable bulking agent and optionally, an aerosol propellant in a volume of gas to produce an aerosolized bolus; and

administering by inhalation to said host's alveolar region said aerosolized bolus, wherein at least two boluses are administered, and wherein said administration results in a pulsatile serum concentration having a peak concentration within about 30 minutes after administration, followed within about 30 minutes by a decrease to below about 50% of said peak.

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57. (Previously Presented) The method of claim 56, wherein the mammalian host is human.

58. (Withdrawn) A method for treating a mammalian host suffering from or at risk of osteoporosis comprising administering by inhalation through the mouth of the host an aerosolized bolus of a pharmaceutical composition comprised of a therapeutically effective amount of a biologically active N-terminal fragment of parathyroid hormone and a propellant, wherein the composition lacks a penetration enhancer.

59. (Withdrawn) The method of claim 58, wherein the mammalian host is human.

60. (Currently Amended) The method of claim 56, wherein the aerosol propellant, if present, comprises a chlorofluorocarbon or a hydrofluorocarbon.

61. (Previously Presented) The method of claim 56, wherein the aerosol propellant comprises a chlorofluorocarbon.

62. (Previously Presented) The method of claim 61, wherein the chlorofluorocarbon comprises at least one member selected from trichloromonofluoromethane, dichlorotetrafluoroethane, and dichlorodifluoromethane.

63. (Previously Presented) The method of claim 56, wherein the aerosol propellant comprises a hydrofluorocarbon.

64. (Previously Presented) The method of claim 63, wherein the hydrofluorocarbon comprises at least one member selected from tetrafluoroethane and heptafluoropropane.

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65. (Currently Amended) The method of claim 56, wherein the ~~composition comprises a powder having~~ comprises a mean particle size in the range from 0.5 μm to 5 μm .

66. (Currently Amended) A method for treating osteoporosis in a mammalian host comprising administering by inhalation an aerosolized bolus of a pharmaceutical composition consisting essentially of a therapeutically effective amount of a biologically active N-terminal fragment of parathyroid hormone, a pharmaceutically acceptable bulking agent and an aerosol propellant, wherein the bulking agent comprises at least one member selected from sucrose, lactose, trehalose, human serum albumin, glycine, cellobiose, dextrans, maltotriose, pectin, sodium citrate, sodium ascorbate, and mannitol, and wherein said administration results in a pulsatile serum concentration having a peak concentration within about 30 minutes after administration, followed within about 30 minutes by a decrease to below about 50% of said peak.

67. (Previously Presented) The method of claim 56, wherein the biologically active N-terminal fragment of parathyroid hormone is PTH34.

68. (Previously Presented) The method of claim 56, wherein the biologically active N-terminal fragment of parathyroid hormone is PTH38.